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May 30, 2001

Donna Wieting, Chief  
Marine Mammal Conservation Division  
Office of Protected Species  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring MD  
20910-3226  
USA

Dear Ms. Wieting:

Re: **RIN 068-AM62 Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Navy Operations of Surveillance Towed Array Sensor System Low Frequency Active Sonar 66 FR 15375**

I am writing to express my strong reservations regarding a rule allowing the U.S. Navy to proceed with development of the SURTASS LFA sonar. There seem to be several areas where concern is justified.

For the Navy to proceed requires a responsible judgment that "the taking will be small" and "have a negligible impact on the species or stock(s) of affected marine mammals. "It appears that NMFS does not have an acceptable basis for estimating either the extent of the take, or the impact on the potentially affected species or stock(s) for most of the species most likely to be affected.


1. The species most likely to be affected are pelagic cetaceans. There are no reasonable audiograms for any of the potentially affected species. In particular, we lack information on the beaked whales (Family Xiphiidae) as a group. If acoustic sensitivities are unknown it is impossible to estimate the potential for injury to individuals, or the impact on stocks. It is hard to see how NMFS can justify issuing a permit on the basis of the available information.
2. There are between 18 and 20 species of beaked whales and an unknown number of stocks. There are no reliable estimates of the total population for any species. For at least 90% of the species no stock(s) can be defined. If a stock cannot be identified, stock size, composition, status, trends, or distribution cannot be approximated within acceptable levels of confidence. In the absence of such information it is hard to understand how NMFS can estimate taking, or the impact of taking, on stocks or population(s) and issue a permit. Also, the dugong should not have been excluded from the list of species at risk. Dugongs occur more than 12 NM offshore in Australian waters (Marsh et al., 1989, Aust. Wildl. Res. 16: 429-440). As the dugong is a species at risk, an application to the U.S. Fish and Wildlife Service should be made and no action should be taken until this is submitted and a decision rendered by USFWS.

3. The research on which the Navy's assessments of potential effects is based was inadequate and/or inappropriate. The scientists involved in the LFS SRP were not sufficiently independent (the Navy limited the location, duration, and scope of the research). Most experiments were conducted in inshore areas (generally within 12 NM of shore) whereas the navy proposes to operate offshore where acoustic conditions differ. The species selected for study did not represent an appropriate or representative group. The gray whale (*Eschrichtius robustus*) is an inshore species, likely to be less acoustically dependent and perhaps the least sensitive of the baleen whales. The areas where the Navy proposes to operate generally exclude gray whale habitat. The value of the humpback whale (*Megaptera novaeangliae*) studies is difficult to evaluate because humpbacks on the breeding grounds may ignore stimuli that interfere with vital activities (such as foraging, care of young, or navigation) at other times and in other contexts. It is not clear that the blue whale (*Baleonoptera musculus*) studies used the SURTASS LFA source at full power, or replicated the Navy's planned deployment in "testing, training, or routine military operations" in any respects. The techniques used to evaluate the impact of the received levels in any of the experiments were not sufficiently sensitive to give a reliable indication of either immediate impact or cumulative effects of SURTASS-LFA broadcasts. Most seriously the research did not justify revision of the general criterion for possible impact from 120 dB RL to 180 dB RL. To take into account uncertainty the Navy should have presented comparisons of the potential "take" for each species under the 120 dB and 180 dB criteria. All of the experiments were short term and under limited ranges of environmental conditions.
4. The mitigation measures proposed by the Navy will be ineffective. Visual monitoring from vessel moving at ">5.6km/h" will not detect presence of animals that may submerge for 30 minutes or more. The present vessel (R.V. Corey Chouest) has no obvious features (such as a "crow's nest with 360 degree view) designed to facilitate effective visual monitoring. The use of powerful high frequency sonar to detect the presence of marine mammals introduces another (unevaluated) source of disturbance or injury. No validation is provided for passive acoustic monitoring in detection of beaked whales within any zone of potential injury. Reliance on stranding networks to detect impact of offshore operations on pelagic animals is not likely to detect even very serious effects, and will in any case be so delayed that it will not be possible to demonstrate cause and effect. There has been no research showing that "5 minute ramp-up" causes animals to move away, or allows them to do so before serious injury has occurred.  
My confidence in the mitigation measures would increase somewhat if a NMFS observer were to be required on all ships deploying LFA sonar.
5. The Navy proposes to use LFA for two-week periods, three times annually. We have no information on which to judge whether the duration, or the timing, of such use are significant factors in the impact on marine mammals (i.e. will the exercises occur when disturbance is particularly likely or serious?).

While the potential use of SURTASS LFA in times of war or other military "emergency", or the proliferation of similar systems throughout the navies of the world, may not legally fall within the purview of NMFS decision making, it is morally imperative that NMFS decision makers take cognizance of the

ultimate consequences of a decision made under pressure and on the basis of inadequate information under the rules that do apply. I believe that if any of the points made above are valid it is incumbent on NMFS not to bend the rules to accommodate SURTASS LFA sonar. NMFS should deny a "small take" permit.

Sincerely,

A handwritten signature in cursive script, reading "Paul K. Anderson". The signature is written in dark ink on a white background.

Paul K. Anderson  
Emeritus Professor of Zoology

cc: S. Jordan (E-mail: [Sjordan51@aol.com](mailto:Sjordan51@aol.com))

T.J. O'Shea. Chair, Marine Mammals Committee. American Society of Mammalogists (E-mail: [tom\\_o'shea@usgs.gov](mailto:tom_o'shea@usgs.gov))